Welcome
Public Meeting to
Introduce Draft Chesapeake Bay Milestones and Virginia's Draft Nonpoint Source Plan
February 25, 2014

Abingdon, Accomac, Glen Allen, Harrisonburg, Lynchburg, Richmond, Roanoke, Virginia Beach, Woodbridge

Russ Baxter,

Appointed Deputy Secretary of Natural Resources for the Chesapeake Bay

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

PURPOSE OF PUBLIC MEETING

- Informational session
- Introduction to two planning documents
- Opportunity to ask questions prior to submitting written comments

DEQ
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Alignment of Chesapeake Bay and NPS Management Plan milestone development and planning

- DEQ is the lead agency for nonpoint source pollution management program, alignment of TMDL and stormwater programs (62.1-44.15)
- Build efficiency, collaboration and thoroughness in planning
- Potential for confusion

AGENDA

Chesapeake Bay TMDL and WIP – James Davis-Martin

Questions and Answers

12:30 Lunch

1:30 *Wrap up Questions and Answers*

NPS Plan: Key Elements – Liz McKercher

State Nonpoint Source Programs – Eric Aschenbach (VDH), Rick Week & Gary Moore (DCR), Darrell Marshall (VDACS), Roy Mills (VDOT), Liz McKercher (DEQ with discussion of DMME and DOF)

Questions and Answers

4:15 Next steps

4:30 Adjourn

TOTAL MAXIMUM DAILY LOAD (TMDL)

TMDL: the pollutant loading a watershed can assimilate and still meet water quality **standards**

Load Allocation (LA)

+

Waste Load Allocation (WLA)

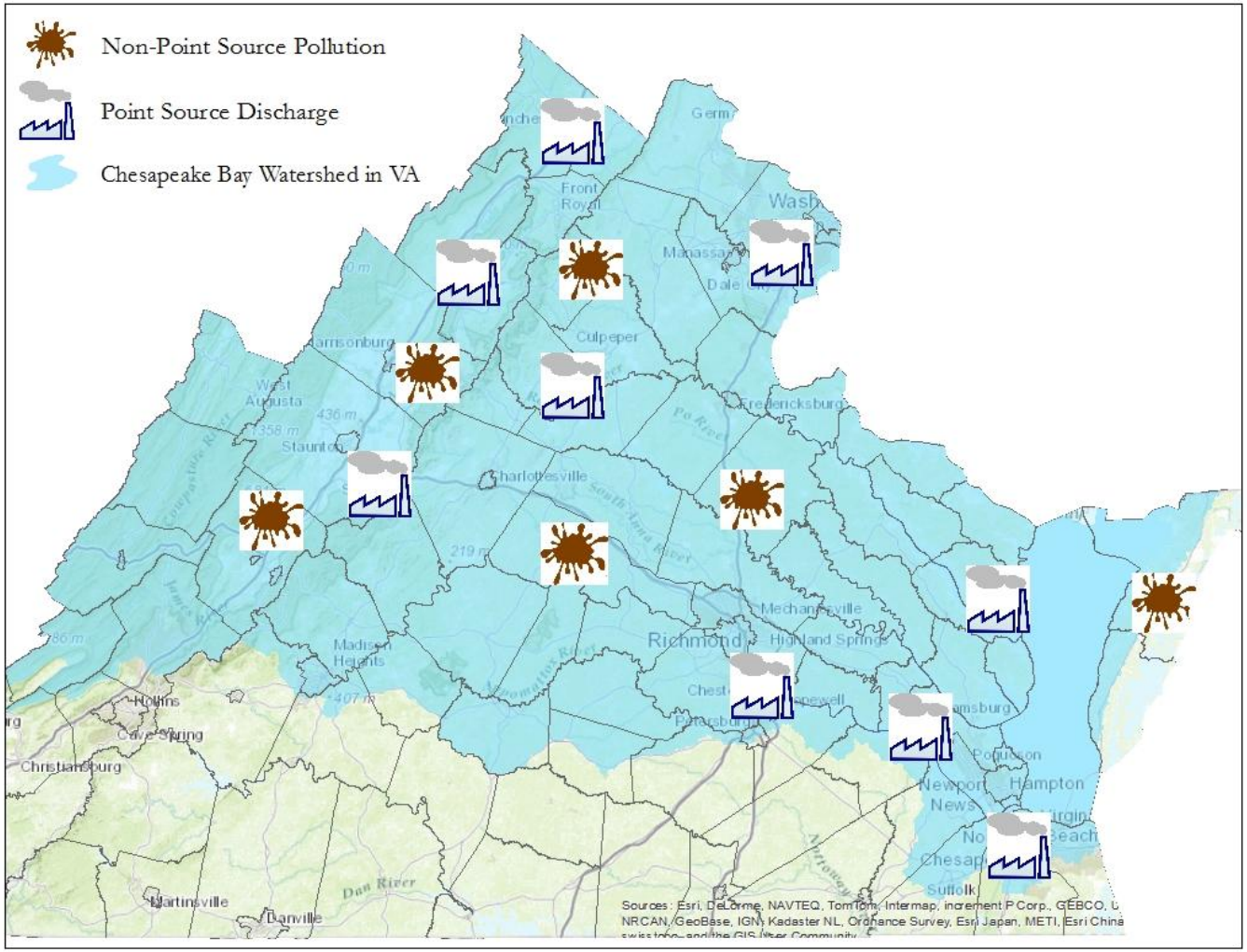
+

Margin of Safety

Nonpoint Source – diffuse sources of pollution (e.g. runoff)

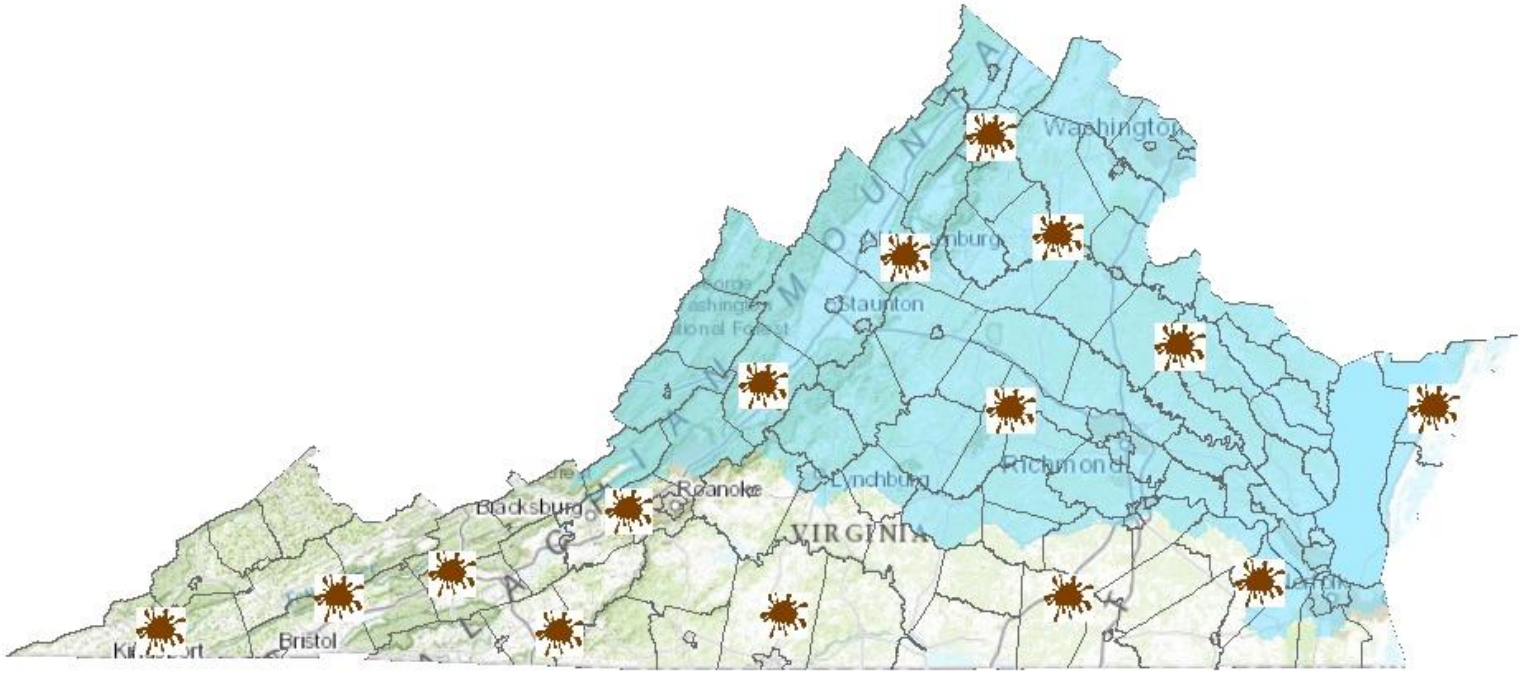
Point Source – pollution sources coming from regulated outfalls (e.g. industrial facility)

Chesapeake Bay Milestones Include Point and Nonpoint Sources



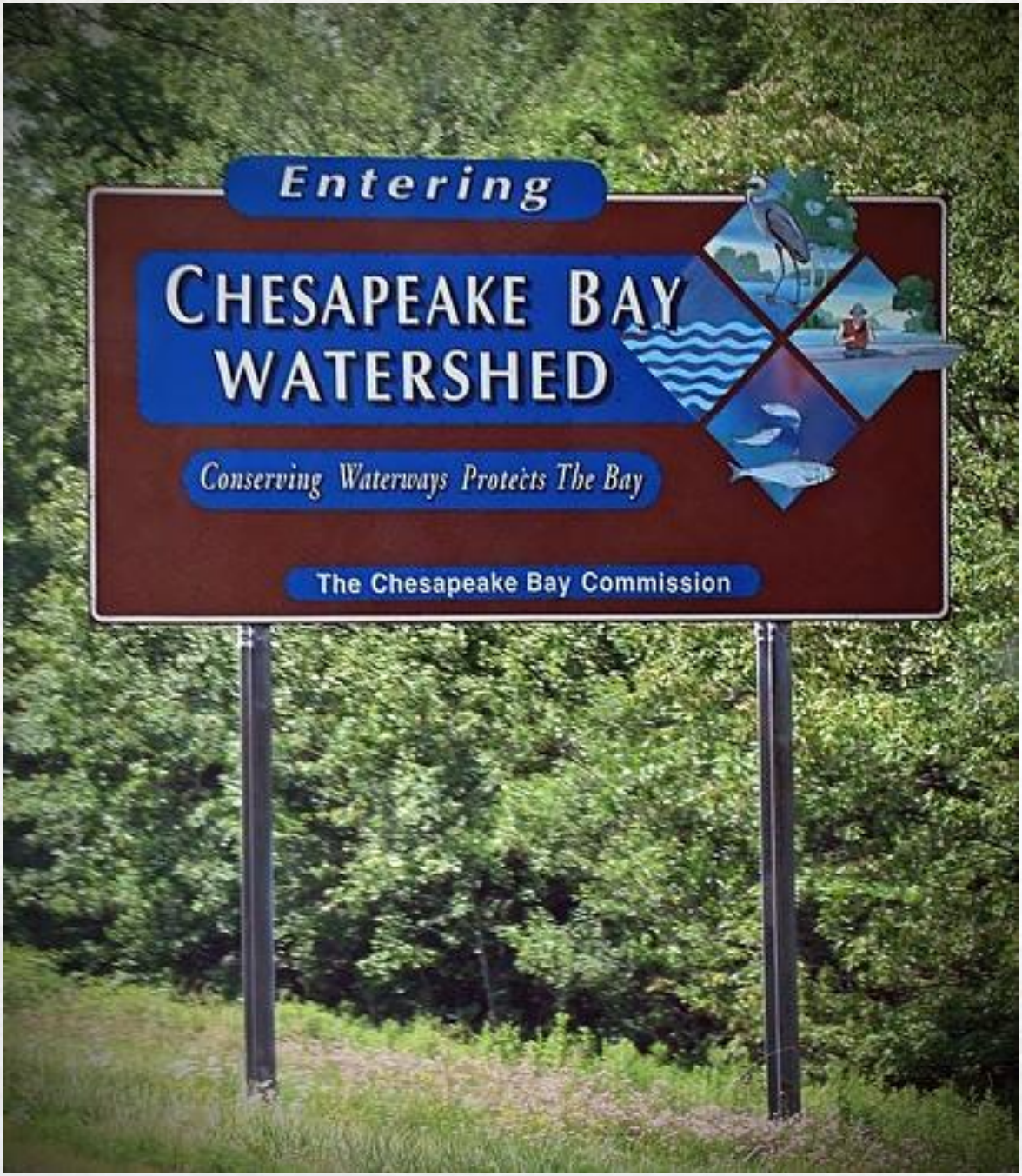
Nonpoint Source Plan

Encompasses all of Virginia



Non-Point Source Pollution

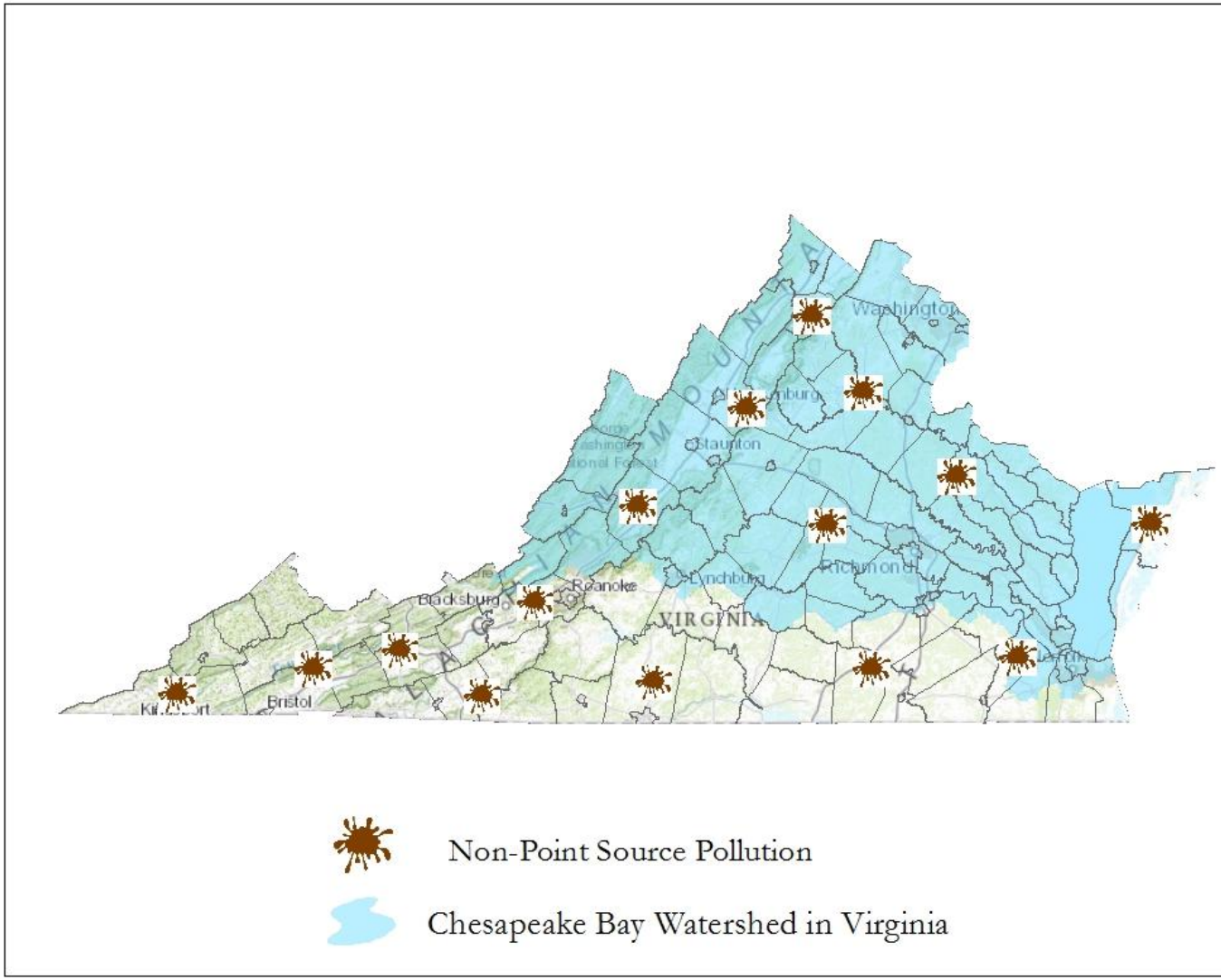
Chesapeake Bay Watershed in Virginia


Entering
CHESAPEAKE BAY
WATERSHED
Conserving Waterways Protects The Bay
The Chesapeake Bay Commission

Virginia Nonpoint Source Pollution Management Program Plan Public Meeting February 25, 2014

Liz McKercher
DEQ Watershed Program

STATEWIDE, NONPOINT SOURCE PLAN



NONPOINT SOURCE MANAGEMENT PROGRAM PLAN

INTRODUCTION

- **State and Federal laws**, which set forth nonpoint source pollution programs

WATERSHED PRIORITIZATION

MILESTONE DEVELOPMENT AND TRACKING

PROGRAM DESCRIPTIONS

- **Diverse network of state and local government efforts**
- **Planning, Restoration, Protection, Education and Outreach, Funding**

Introduction: State and Federal Laws

- **Cooperative nonpoint source pollution program (10.1-2224)**
  - meets Constitution of Virginia requirement to protect state waters
  - **Counties, cities, and towns**
  - **Individuals**
  - **Soil and water conservation districts**
  - **Watershed Roundtables**
  - **Agencies of the Secretariat of Natural Resources, Department of Forestry, Department of Agriculture and Consumer Services**

INTRODUCTION: STATE AND FEDERAL LAWS

Section 319 of the Federal Clean Water Act (CWA) requires that states develop and implement NPS pollution management programs

INTRODUCTION: REASON FOR THIS UPDATE

- U.S. Environmental Protection Agency guidance issued in 2012 requires Virginia to have updated management plan by September 30, 2014.
  - **short- and long-term goals, abating known water quality impairments** & **protecting threatened and high quality waters, identifies NPS impairments and prioritizes them, measures, reports**
- When approved, the 2014 Virginia NPS Pollution Management Plan will replace the 1999 Nonpoint Source Management Plan

WATERSHED PRIORITIZATION

States identify waters and watersheds impaired by NPS pollution as well as priority unimpaired waters for protection. The state establishes a process to assign priority and to progressively address identified watersheds by conducting more detailed watershed assessments, developing watershed-based plans and implementing the plans.

- Priorities for TMDL development or alternative cleanup plans
- Priorities for watershed implementation plans

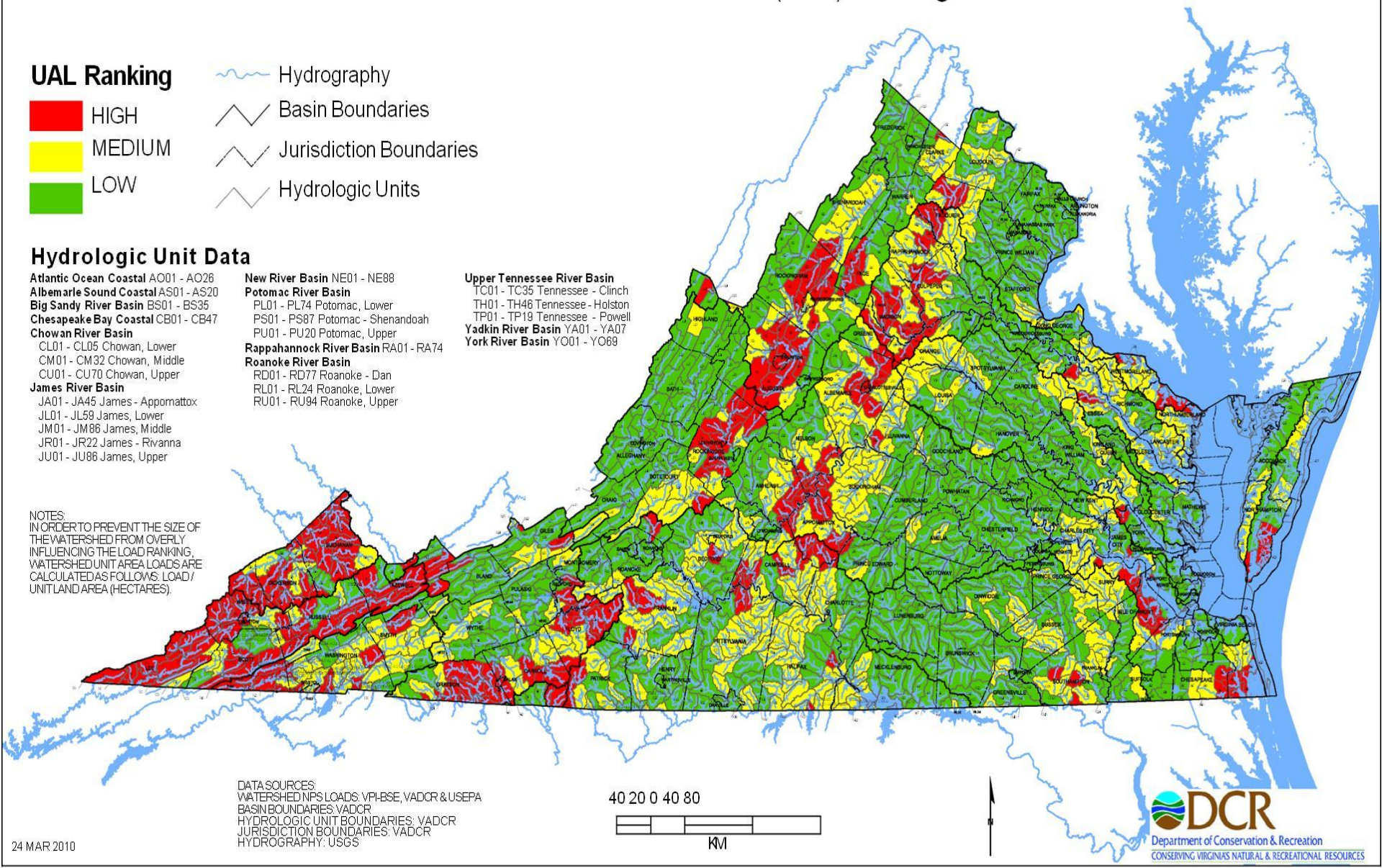
POTENTIAL WATERSHED PRIORITIZATION RESOURCES

- 303(d), 305 (b) Water Quality Assessment
- Nonpoint Source Assessment
- Shellfish Closure and Shoreline Survey
- State Water Resources Plan
- Federal, regional, and local level data
- Natural Heritage data, Academic and state agency monitoring and assessment data such as the Interactive Stream Assessment Resource (INSTAR)

Figure 4.1-12

Virginia's 2010 Nonpoint Source Pollution Potential Priorities:

Total Sediment Unit Area Load (UAL) Ranking



MILESTONE DEVELOPMENT AND TRACKING

- Chesapeake Bay Clean-up Goals
  - Develop resource management plans on at least 40 agricultural operations (DCR)
  - Reclaim 1,000 acres of mine land (DMME)
- Local TMDL/Watershed Program Goals
  - Develop three TMDL implementation success stories per year (DEQ)

PROGRAM DESCRIPTIONS

AGRICULTURAL AND FORESTAL PROGRAMS

- Cost-Share Program
- Nutrient Management
- Agricultural Stewardship Act
- Virginia Resource Management Program
- Clean Water Financing and Assistance
- Low Interest Loans for Agricultural Best Management Practices
- Forestry Water Quality Program

CHESAPEAKE BAY AND COASTAL ZONE MANAGEMENT PROGRAMS

- Chesapeake Bay Programs
- Chesapeake Bay Preservation Act Program
- Coastal Nonpoint Source Program
- Coastal Zone Management

RESOURCE MANAGEMENT AND LAND CONSERVATION PROGRAMS

- Land Preservation
- Virginia's Healthy Waters Program
- Submerged Lands Management Program
- Wetland and Stream Protection

MARINA AND ONSITE SEWAGE MANAGEMENT

- Onsite Sewage and Water Programs
- Shellfish Sanitation
- Marina Program
- Clean Marina Program

RESOURCE EXTRACTION PROGRAMS

- Resource Extraction

URBAN PROGRAMS

- Stormwater Management
- Erosion and Sediment Control

WATERSHED PLANNING PROGRAMS

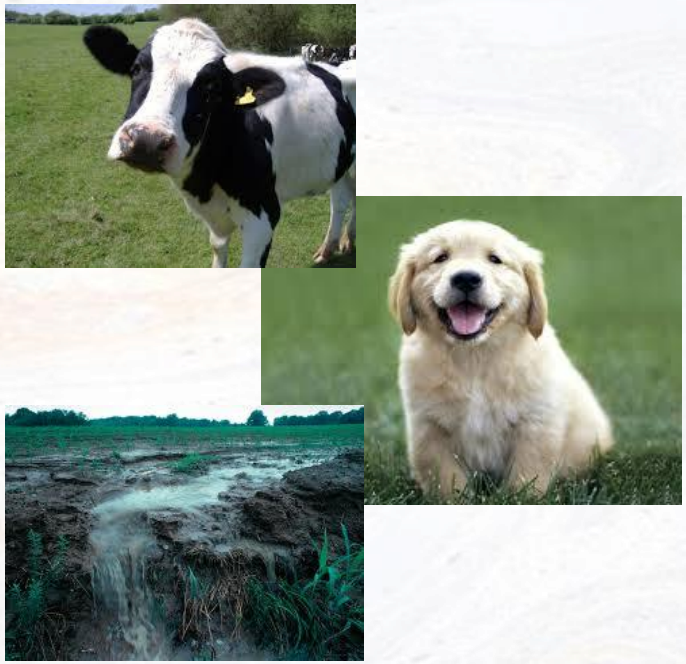
- Water Supply Planning
- Withdrawal Permitting

WATER QUALITY PROGRAMS

- Virginia Pollution Abatement Permit (VPA)
- Water Quality Monitoring and Assessment
- Virginia's Brownfield Remediation Loan Program
- Virginia Water Quality Standards

PROGRAM DESCRIPTIONS: SOURCES OF NONPOINT SOURCE POLLUTION ADDRESSED IN THE PLAN

- Livestock & Pet Waste
- Fertilization
- Soil Erosion
- Malfunctioning Septic Systems
- Boat Waste



- Focus on Nitrogen, Phosphorus, Sediment, Bacteria

Coordination with Other Programs

- Clean Water Act Section 303 (d) Long-Term Vision for Water Assessment, Restoration, and Protection
- Chesapeake Bay Watershed Clean-up
- Water Quality Monitoring and Assessment
- Water Resources Planning

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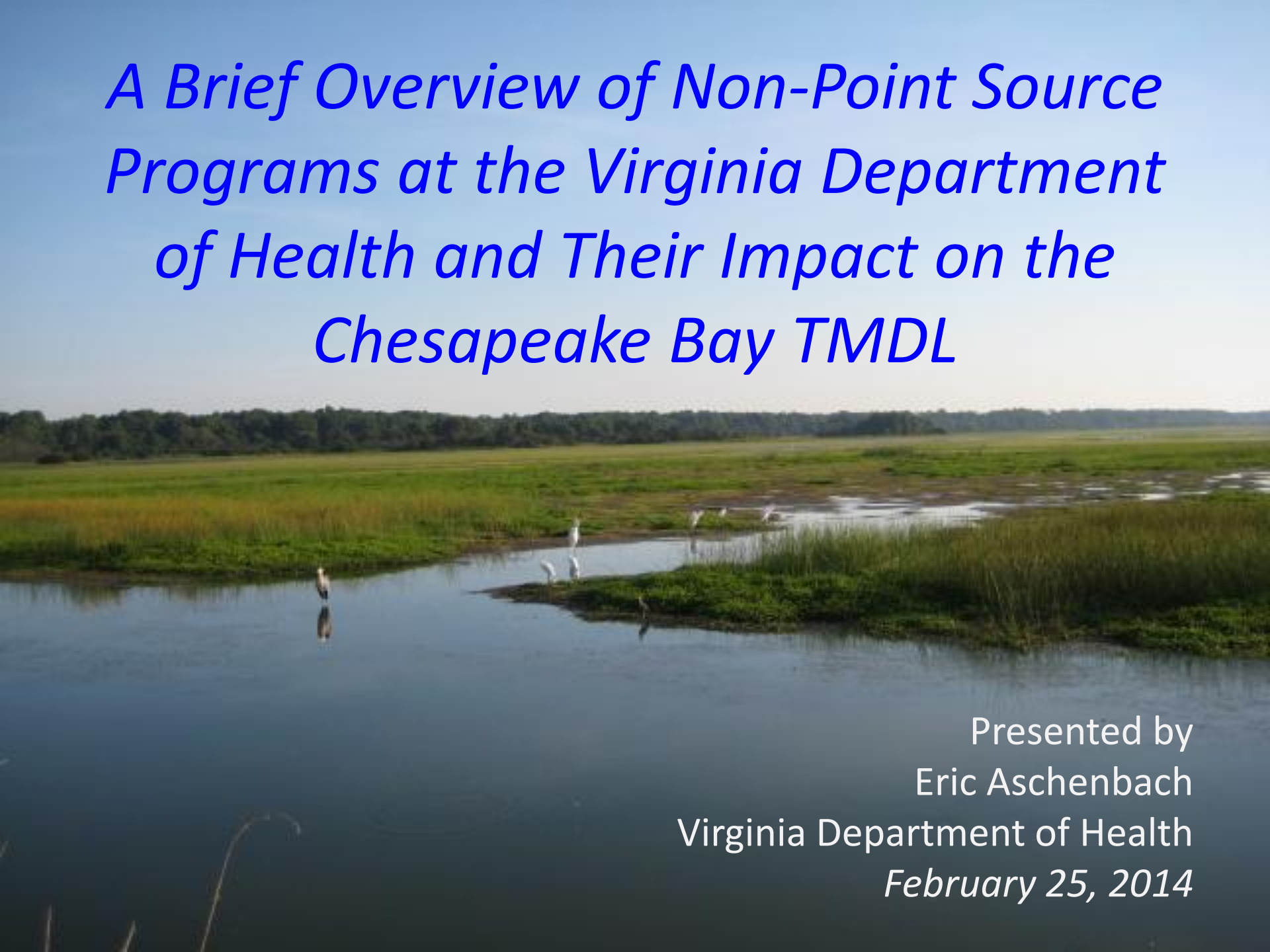
VDH VIRGINIA DEPARTMENT OF HEALTH

Protecting You and Your Environment

Eric Aschenbach

http://www.vdh.state.va.us/

A Brief Overview of Non-Point Source Programs at the Virginia Department of Health and Their Impact on the Chesapeake Bay TMDL



Presented by
Eric Aschenbach
Virginia Department of Health
February 25, 2014

NPS Programs at VDH

- Office of Environmental Health Services (OEHS)
  - Onsite Sewage and Water Services Program
  - Marina Program
  - Shellfish Sanitation Program
- Office of Drinking Water (ODW)
  - Source Water Protection Program

Highlight

- Onsite Sewage Program – Alternative Onsite Sewage Systems
- Shellfish Sanitation Program – Shoreline Surveys

Onsite Sewage Program – Background

- Mission – "protect public health and ground water quality"
- How
  - Regulations that govern the installation of onsite wastewater treatment systems
  - Guidance, training, technical assistance, and administrative support to field staff
  - Foster and maintain communication with an onsite community made up of contractors, engineers, soil scientists, pumpers, academics, manufacturers, real estate agents, and homeowners.

Onsite Sewage Program – Background (cont.)

- The regulations
  - Sewage Handling & Disposal (12 VAC 5-610)
  - Alternative Onsite Sewage Systems (12 VAC 5-613)
- Multi-step process to ensure compliance with the design and operation standards
  - Issuance of a construction permit
  - Receipt of a completion statement verifying compliance with the approved design
  - Issuance of an operation permit
  - (For alternative systems) Requirement for ongoing operation and maintenance (O&M) activity with routine reporting to VDH

"The Chesapeake Bay Nitrogen Requirements"

Alternative Onsite Sewage Systems (AOSS)

12 VAC 5-613

- Regulations for AOSS effective Dec. 7, 2011.
  - Include performance and O&M requirements
  - At a minimum, a yearly inspection report is required
  - Larger systems (> 1,000 gpd) have renewable operating permits, routine sampling requirements, and more frequent O&M requirements.
- On Dec. 7, 2013, additional requirements for at least 50% nitrogen reduction for AOSS in the Chesapeake Bay watershed became effective (Section 90.D).

Applicability of Bay N Limits

- Applies to:
  - AOSSs in the Chesapeake Bay watershed
  - Applications received on or after December 7, 2013:
    - Construction application
    - Repair application for failing system
    - Renewable operating permit reissuance application
- Does NOT apply to:
  - Conventional onsite sewage systems
  - Onsite sewage systems outside the Chesapeake Bay watershed

Best Management Practices (BMPs)

- Existing BMPs
  - Septic tank pump-outs
  - 50% N removal treatment units (proprietary systems, NSF245)
  - Connection to centralized sewer service
- New BMPs under review by EPA-CBP are combination systems (treatment & soil dispersal)
  - 20% N removal
  - 38% N removal
  - 50% N removal
  - 69% N removal

Treatment and Soil Based BMP Combinations and Resulting Net TN Reduction		
Treatment Unit TN Reduction	**Soil Dispersal TN Reduction**	**Net TN Reduction of Combined System**
• Septic Tank	• Gravity drainfield	0%
• Septic Tank	• Shallow placed drip or LPD • Elevated Sand Mounds	38%
• Single Pass Sand filter • Constructed Wetlands • TL-2 or TL-3 Treatment Unit	• Gravity drainfield	20%
• Single Pass Sand filter • Constructed Wetlands • TL-2 or TL-3 Treatment Unit	• Shallow placed drip or LPD • Elevated Sand Mounds	**50%**
• Recirculating Sand/Gravel Filter • Proprietary N Removal Systems	• Gravity drainfield	**50%**
• Recirculating Sand/Gravel Filter • Proprietary N Removal Systems	• Shallow placed drip or LPD • Elevated Sand Mounds	**69%**

Providing Reasonable Assurance

Verifying Compliance

BMP Verification – Small Systems

- Each BMP has specific design requirements in order to qualify.
- Intentionally set at a conservative level and only include well-documented practices
- Verification of a BMP is required by EPA
- Ongoing sampling to verify cost prohibitive
- Due to the conservative nature of the BMPs, verification by licensed operator that the system (BMP) is functioning as designed is adequate.

Verifying Compliance – Large Systems

- Monitoring to verify compliance
- Routine electronic reporting of operation and maintenance (O&M)
- O&M by licensed operator
- Frequencies in accordance with AOSS Regulations

Guidance Memorandum & Policy (GMP) 156

- The policy addresses the use of BMPs for compliance with the Chesapeake Bay watershed nitrogen limits for small alternative onsite sewage systems (AOSSs) and briefly discusses the limits for large systems as well

- The policy can be found at www.vdh.virginia.gov/EnvironmentalHealth/ONSITE/gmp/index.html

Summary

- The N limits only apply to:
  - New , expanding or failing that require an AOSS
  - Reissuing AOSSs
  - In the Bay Watershed
- All small AOSSs must utilize approved BMPs or submit monitoring to verify TN reduction
- All large AOSSs and direct dispersal require sampling to verify TN reduction

Division of Shellfish Sanitation

Shoreline Surveys

Shellfish Sanitation Program – Background

- Mission – "…minimize the risk of disease from molluscan shellfish and crustacea products at the wholesale level by classifying … waters for safe commercial and recreational harvest…"
- How
  - Regulatory inspection program for commercial processors and shippers
  - Guidance to the shellfish and crustacea industries regarding technical and public health issues
  - Shoreline Surveys

Shoreline Survey Program

- Primary step in determining the proper classification of shellfish waters
- Watershed is examined for the presence of actual and potential sources of pollution
- Involves visiting all properties on the drainage basin that are deemed capable of impacting shellfish harvesting areas

Shoreline Survey – Site Visits

- All onsite sewage facilities are investigated to see if they are functioning properly
- All potential sources of other pollution including animal waste, toxic substances, industrial discharges, marinas, wastewater treatment facilities, etc.

Shoreline Survey – Reporting

- A survey report maps the properties that:
  - were inspected
  - had an actual or potential pollution sources found onsite, including the type of pollution found
- The final report is sent to the locality and the state agencies responsible for the various types of problems found

Shoreline Survey – Reporting (cont.)

- Shoreline Survey information is combined with:
  - water quality monitoring data to assess bacteriological and viral indicators of contamination
  - modeling of point sources to estimate the extent of potentially affected areas
- To establish shellfish harvest restrictions in any areas identified as having unacceptable risk

Shoreline Survey – Follow-up

- Average over 13,000 properties/yr investigated
- Land areas resurveyed about every 6 to 8 years

Contact Information

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www.vdh.virginia.gov/

Environmental Health: Restaurant Inspections, Sewage & Water Services, Food Safety, Lead, Shellfish Sanitation…

Drinking Water: Waterworks Owners, Operators, Laboratories, Consumers…

VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment

Agriculture Cost Share - Gary Moore

Nutrient Management – Rick Weeks

http://www.dcr.virginia.gov/water_quality/index.shtml

DCR NonPoint Pollution Prevention Division Agricultural Incentive Programs

DCR NP3
Financial Incentives Programs

- Virginia Agricultural BMP Cost-Share (VACS)
- Virginia Agricultural BMP Tax Credit (Ag.BMP)
- Ag. BMP Tax Credit Program
- Conservation Reserve Enhancement Program (CREP)

Virginia Agricultural BMP Cost-Share (VACS) Program Purpose and Approach

- "The Program's goal is to improve water quality in the state's streams, rivers, and the Chesapeake Bay. VACS offers cost-share assistance as an incentive to carry out construction or implementation of selected Best Management Practices (BMPs).

- VACS encourages the voluntary installation of agricultural BMPs that reduce the overland flow of nitrogen, phosphorous and sediment to meet Virginia's non-point source pollution reduction water quality objectives."

Program Framework

- Voluntary Implementation of BMPs on Ag. land for Water Quality Improvement
  - Focused on Implementation
  - Must be an existing water quality problem
  - Address the worst problems first (targeting)
  - On a field by field basis

DCR Administers; Soil and Water Conservation Districts Implement

- DCR allocates VNRCF funds to the 47 SWCDs based upon the Ag. nonpoint source assessment
- SWCDs recruit farmers,
- Design & engineer BMPs
- Boards of Directors approve funds for implementation of BMPs based upon the anticipated local water quality improvement

DCR Allocates the VNRCF funds to SWCDs

- Based upon Agricultural Nonpoint Source Assessment (part of NPS 305B & 303D EPA reports) Chesapeake Bay (CB) and Outside of CB are separate allocations
  - ✓Highest ranked 20% of Hydrologic Units (1247 HUs in VA)
    - Receive 55% of the drainage basin allocation $
  - ✓Middle 50% of HUs
    - Receive 30% of drainage basin allocation $
  - ✓Lowest 30% of HUs
    - Receive 15% of drainage basin allocation

How Districts determine which applications receive C-s $

- DCR publishes Priority Considerations

  Basic eligibility criteria must meet at least one:

  - Highest Ranked Hydrologic Units
  - Within or upstream of identified TMDL stream segment
  - Fields that are at lease 1/3 Highly Erodible Land (HEL)
  - Comprehensive Conservation Planning receives priority consideration

SWCDs develop Secondary Considerations Local Water Quality

- Conservation Effectiveness Factor (CEF)
  - Calculated by Ag. BMP Tracking program
- Protection of drinking reservoir source water
- Protection of surface waters (examples)
  - Length of stream bank to be protected
  - Number and type of livestock to be excluded

(Gateway) BMPS that require NMP to receive Cost-share funding

1) **No Till BMPs** ; CCI-CNT, SL-15A, SL-15B
2) **Split Application; BMPs**NM-3. NM-3B,NM-4
3) **Strip Crop BMPs**; SL-3, SL-4
4) **Cover Crop BMPs;** SL-8B, SL-8H
5) **Grazing Management BMPs;** SL-6A, SL-9
6) **Animal Waste Practices;** WP-4, WP-4B

Applicants for these BMPs must be fully implementing a current nutrient management plan that is on file with the SWCD before cost-share approved.

NEW in 2014

- The DCR is marketing the SL-6 program at 100% for FY14 and FY15 after which time the cost-share percentage will be reduced.
- All participant enrollments received during this two-year period will be honored as cost-share funds become available.

VACS Technical Advisory Committee (TAC)

- To gather input from stakeholders
- Comprised of representatives from:
  - SWCDs
  - VA conservation partner agencies
  - Federal partner agencies
  - Ag. Associations,
  - NGO's
- TAC develops recommendations regarding state cost-share specifications for BMPs.

"Policy and Procedures on Soil and Water Conservation District Cost-share and Technical Assistance Funding Allocations for Fiscal Year 2014"

http://townhall.virginia.gov/L/Gdocs.cfm

- This policy document controls how the DCR Division of Nonpoint Pollution Prevention (NP3) will administer VACS
- In 2015 control of the VACS shifts to the Soil and Water Conservation Board

VACS Agricultural BMP Manual

- Available for download at:
  - Virginia Agricultural Cost Share Manual Program;
  - URL = http://dswcapps.dcr.virginia.gov/htdocs/agbmpman/agbmptoc.htm

Entire manual, one section, or one specification can be downloaded

Other Conservation Incentives

- **Conservation Reserve Enhancement Program** *(CREP)* FSA cost-share $, Practice Incentive $, Signing Incentive $, and Soil Rental $ + state enhancement $
- **Precision Agricultural Equipment Tax Credit**
  - 25% state income tax credit for purchase of advanced technology pesticide and fertilizer application equipment (SWCD approved Nut. Man. Plan, $3,750 max. TC)
- **Conservation Tillage Equipment Tax Credit**
  - 25% state income tax credit for purchase of conservation tillage equipment ($4,000, max. TC)
- **Virginia Agricultural BMP Loan** *(DEQ Revolving Loan Fund)* Low interest loans for structural BMPs & conservation tillage equipment

Conservation Reserve Enhancement Program (CREP)

- Federal state partnership with Farm service Agency and Natural Resources Conservation Service to restore riparian buffers and wildlife habitat
  - On Cropland and pastureland
  - Incentive payments $
  - Cost-share $
  - Rental payments $
  - Permanent Easements

Other Agency Programs Delivered by DCR & SWCDs

- DEQ's Virginia Agricultural BMP Loan (DEQ Revolving Loan Fund)
- DGIF Quail Habitat Restoration Program
- Conservation Tillage Equipment Tax Credit
- Precision Agricultural Equipment Tax Credit

Nutrient Management Plans

- 790,000 acres in the Bay 990,000 state wide
- DCR wrote plans for 176,000 acres last year

NMPs for Animal Waste

- DCR reviewed and approved NMPs for 223 managing animal waste
- Total of 74,622 acres in 2013

Small Unpermitted Dairies

- Goal is to have 75 % under Nutrient Management Plans
- Of the 577 unpermitted dairies 147 are under Nutrient Management Plans
- DCR hired a small farm specialist to focus on small dairies
- Extension Service has also added small farm and dairy specialists

Urban Nutrient Management Plans

- Urban NMP urban acres 39, 817
- Golf Courses
- 8 contractors were granted $115,000 last May to write Golf Course NMP
- 55 have NMPs by the end of May this year
- State owned land
- 78% of state owned lands have current plans
- Still missing a few agencies and institutions

Resource Management Plans

- Voluntary participation by farmers
- Requires both a Nutrient Management Plan and a Conservation Plan
- Must implement all Best Management Practices needed to comply with the plans
- In return farmer gets a 9 year safe haven from new state requirements
- Developing a software module to write Conservation Plans

QUESTIONS ?

Virginia Department of Agriculture and Consumer Services

Bay Milestones/Nonpoint Source Plan

Agricultural Stewardship Act Program

http://www.vdacs.virginia.gov/stewardship/index.shtml

Office of Plant Industry Services

http://www.vdacs.virginia.gov/plant&pest/cfa.shtml

Regulations for the application of fertilizer to non-agricultural lands:
http://www.vdacs.virginia.gov/plant&pest/pdf/2VAC5-405.pdf

Virginia Fertilizer Law- Title 3.2, Chapter 36 of the Code of Virginia

ROY T. MILLS

STATE STORMWATER MANAGEMENT PROGRAM ADMINISTRATOR

VDOT 2014-2015 MILESTONES

- **Establish Pollutant Removal Efficiencies for Typical Roadway Vegetated Shoulders and Drainage Conveyances thereby Promoting the Use of Such Practices over Those Employing Impervious Materials**
  - **Conducted Research, Developed Report, Submitted to DCR**
  - **Currently Following Bay Program Efforts**
  - **Movement Towards Bay Program Efficiencies**
    - Bay Program Urban Stormwater Workgroup Expert Panel Reports

VDOT 2014-2015 MILESTONES

- **Provide DEQ Stormwater Management Training to Relevant Stormwater Personnel and Contractors Performing BMP Review and Inspection Tasks**
  - **VDOT Approved to Conduct Initial Stormwater Management Training Effort for Its Internal and Contractor Personnel**
    - Using Consult personnel to Conduct DEQ SWM Basic and Inspector Training
    - SWM Plan Reviewer Training to follow

VDOT 2014-2015 MILESTONES

- **Revise Guidance Documents to Incorporate and Promote Use of Low Impact Development Techniques and Other Innovative BMPs in Roadway Projects**
  - **Identification of Documents and Development of Necessary Revisions Ongoing**
    - Reflect DEQ's new Stormwater Management Handbook and new Stormwater Regulation requirements to be implemented July 1, 2014

VDOT 2014-2015 MILESTONES

- **Continue "Stormwater Management Comparative Study of Porous Asphalt for I-66 and Route 234 Bypass Park and Ride Facility" to Determine/Develop Maintenance Requirements for Permeable Asphalt Pavement**
  - **Study Underway by VCTIR**

VDOT 2014-2015 MILESTONES

- **Conduct Study on the Cost-Effectiveness of Nutrient Credit Use as an Option for VDOT Stormwater Permitting Requirements**
  - **Development of Feasibility Study and Report Underway by VCTIR**
  - **Pilot Project for Credit Purchase Underway**

Coordination with Other Programs

AGRICULTURAL AND FORESTAL PROGRAMS

Forestry Water Quality Program

CHESAPEAKE BAY AND COASTAL ZONE MANAGEMENT PROGRAMS

Chesapeake Bay Programs

Chesapeake Bay Preservation Act Program

Coastal Nonpoint Source Program

RESOURCE EXTRACTION PROGRAMS

Resource Extraction

Coordination with Other Programs

RESOURCE MANAGEMENT AND LAND CONSERVATION PROGRAMS

Land Preservation

Virginia's Healthy Waters Program

Submerged Lands Management Program

Wetland and Stream Protection

WATER QUALITY PROGRAMS

Virginia Pollution Abatement Permit (VPA)

Water Quality Monitoring and Assessment

Virginia's Brownfield Remediation Loan Program

Virginia Water Quality Standards

Next Steps

- Incorporate Public Comment
- Develop some representative water quality milestones and add graphics to the Plan
- Respond to U.S. Environmental Protection Agency Comment
- Coordinate and Align Agency Programs, such as Virginia 303(d), Chesapeake Bay, and Water Supply Planning
- Continue development of Watershed Prioritization System
- Continuous planning through biennial Bay Milestone and Annual Work Plan processes

Public Comment Period
Feb 25-March 26

Public comments should be submitted in writing to:

Rick Hill, Water Plan Writer
Address: Virginia Department of Environmental Quality-Central Office, P.O. Box 1105, Richmond, Virginia, 23218
E-mail: rick.hill@deq.virginia.gov
Fax: (804) 698-4032


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